

REVISION D



Coordinating OSMA Participation in the International Space Station CoFR Process

_____/s/_____
Bryan O'Connor
Chief Safety and Mission Assurance

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Date

DOCUMENT HISTORY LOG

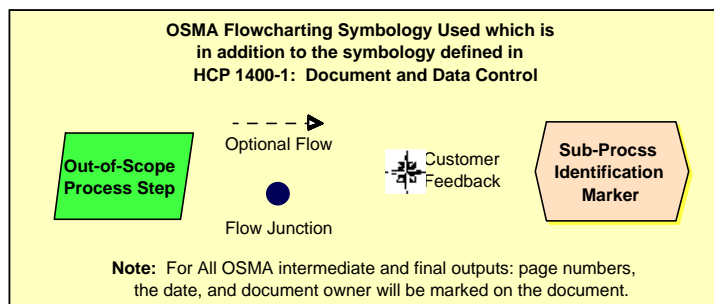
Status (Draft/ Baseline/ Revision/ Canceled)	Document Revision	Effective Date	Description
Baseline		January 13, 2000	
Revision	A	September 14, 2000	Editorial corrections to Section 5 Flowchart, and references 4.3 and 4.7; modified step 6.07.
	B	February 1, 2002	Added customer list, customer feedback to sections 5 and step 6.10.
	C	March 31, 2004	Editorial and organizational changes to all sections.
	D	January 17, 2006	Updated to new Organization Structure, PAR to SMARR, and PAR-FRR to SORR. Several steps in process deleted as a result of SMARR.

HOWI Author: MSD/Gil White

OSMA Staff Members Responsible for this HOWI: MSD/John Tinsley

Customers for this HOWI: Internal: Chief SMA &
AA Space Operations

External: none



1. Purpose

The purpose of this Office of Safety and Mission Assurance (OSMA) Headquarters Office Work Instruction (HOWI) is to document the process for the Safety and Mission Assurance participation in the International Space Station (ISS) Certification of Flight Readiness (CoFR) Process. The OSMA plays a key role in the review of the ISS program for safety, since the Chief Safety and Mission Assurance (Chief SMA) is a required signature of the CoFR, per SSP 50108. This OSMA HOWI provides the flowchart and steps of preparing for and participating in the ISS CoFR as well as establishing the associated quality records.

2. Scope and Applicability

This OSMA HOWI is applicable to the OSMA staff that are assigned to perform tasks within the OSMA CoFR process. This HOWI will assist in ensuring that the involved staff performs a quality assessment of the ISS mission assurance. The process is repeated for each ISS launch and mission.

3. Definitions

- 3.1. Chief SMA: Chief Safety and Mission Assurance
- 3.2. CoFR: Certification of Flight Readiness
- 3.3. FRR: Flight Readiness Review
- 3.4. ISS: International Space Station
- 3.5. ISS Increment: The period of time from when the Space Shuttle arrives at the ISS until its next arrival on a following flight.
- 3.6. JARSWG: Joint American Russian Safety Working Group
- 3.7. MMT: Mission Management Team
- 3.8. NFSAM: Nuclear Flight Safety Assurance Manager
- 3.9. NLSA: Nuclear Launch Safety Approval
- 3.10. PSRP: Payload Safety Review Panel
- 3.11. SMAP: SMA Panel
- 3.12. SMARR: SMA Readiness Review
- 3.13. SORR: Stage Operations Readiness Review
- 3.14. SRP: Safety Review Panel

3.15. SSP: Space Shuttle Program**4. Reference Documents**

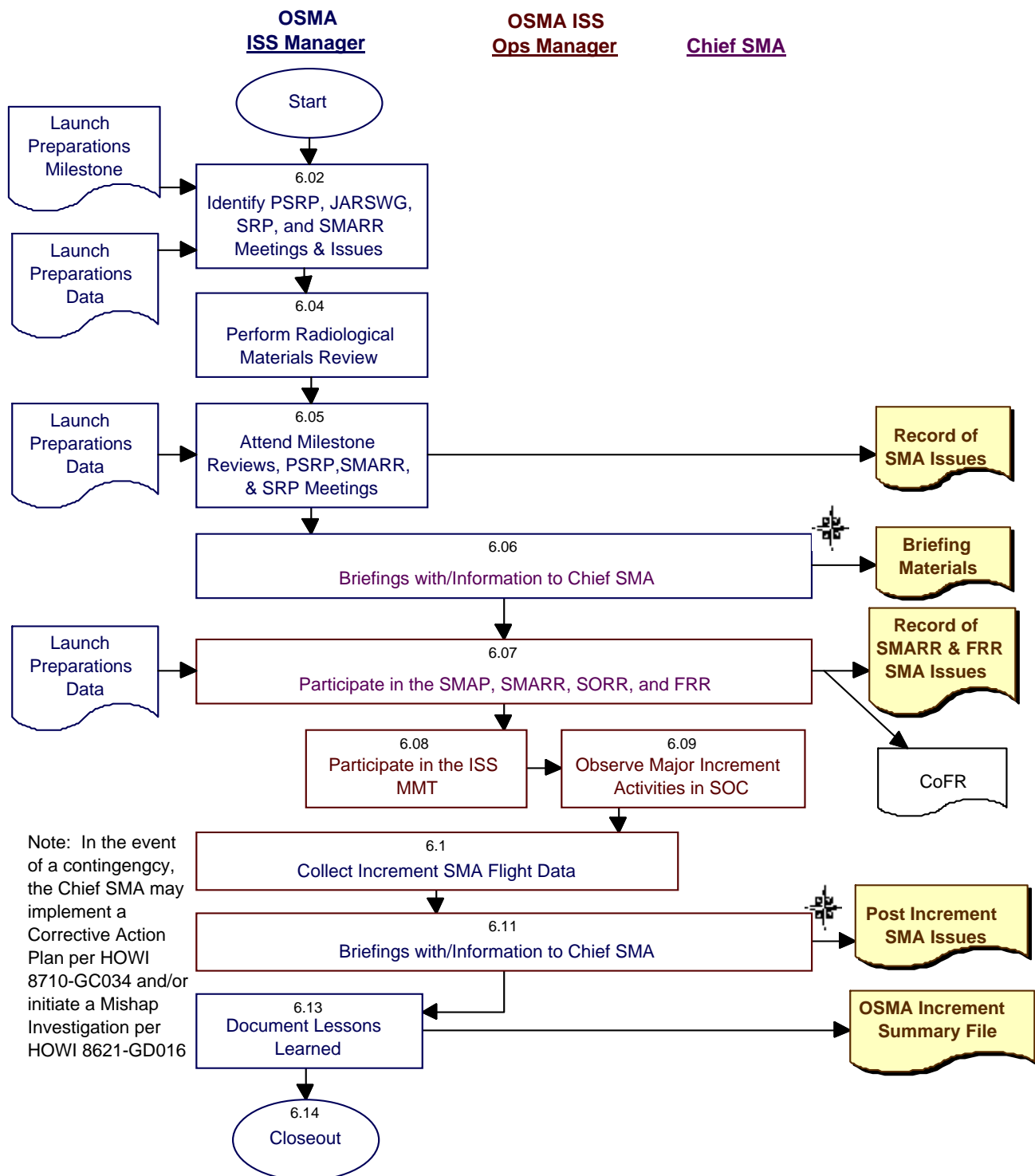
The documents listed in this section are used as reference materials for performing the processes covered by the Quality Management System (QMS). Since all NASA Headquarters Level 1 (QMS Manual) and Level 2 (Headquarters Common Processes) documents are applicable to the QMS, they need not be listed in this section unless specifically referenced in this OSMA HOWI.

4.1. [NPR 8715.3: NASA Safety Manual](#)4.2. ISS Management Directive, *International Space Station Safety Review Panel (SRP) Charter*, November 2004.4.3. NSTS 22778, *Space Shuttle Program Safety, Reliability, and Quality Assurance Commit-To-Flight Assessment Review Process Operating Plan*

NOTE: Change 1 of October 21, 1997, added the requirement.

4.4. SSP 30599, *Safety Review Process* (<http://www.jsc.nasa.gov/srp/document.html>)4.5. SSP 50231, *Safety and Mission Assurance Certification of Flight Readiness Implementation Plan*.4.6. SSP 50108, *ISS Certification of Flight Readiness Process Document*.
(<http://iss-www.jsc.nasa.gov/cgi-bin/dsqt/orap?-h+docnco/+73387>)4.7. [Safety and Mission Assurance Agreement for Space Operations Mission Directorate](#)

5. Flowchart



6. Procedure

6.01 OSMA ISS Mgr Identify PSRP, JARSWG, SRP and SMARR Meetings and Issues:

The OSMA ISS Manager reviews the available on-orbit ISS status, ISS flight element data, Payload Safety Review Panel (PSRP), Joint American Russian Safety Working Group (JARSWG), and Safety Review Panel (SRP) meeting data. From this review, any SMA issues are recorded. OSMA ISS Manager is a panel member of the SRP per the ISS SRP Charter. Open issues from the previous increments are brought forward as open issues on the next ISS increment.

6.02 OSMA ISS Mgr Perform Radiological Materials Review:

The OSMA ISS Manager reviews the vehicle and payload data to determine if ANY radiological materials will be present at launch. If there are radiological materials planned, the OSMA Nuclear Flight Safety Assurance Manager (NFSAM) is contacted. HOWI 8710-GA014 is used in accordance with NPG 8715.3 Chapter 5. The Shuttle Ops SMA Manager will remain in contact with the NFSAM to assist in the obtaining of Nuclear Launch Safety Approval (NLSA).

6.03 OSMA ISS Mgr Attend Milestone Reviews, PSRP, JARSWG, SMAP, SMARR, and SRP Meetings:

Attend the milestone reviews that will impact the SMA of the mission (PSRP, JARSWG, SMA Panel (SMAP), SMARR, and SRP) and file information on issues and record/update concerns in the mission folder:

1. Independent Assessment Readiness Review,
2. SMA Readiness Review (per SSP 50231),
3. Launch Package Readiness Review (per SSP 50108),
4. ISS Operations Readiness Review (per SSP 50108),
5. SMA Readiness Review (SMARR). The agenda is coordinated through the OSMA from participation in weekly SMARR and SMAP teleconferences.
6. ISS SRP and PSRP meetings (per SSP 30599). Evaluate data presented regarding affect on the overall ISS risk posture and file information in mission folder:
 - New or modified Hazard Reports,
 - Safety issues and concerns.

Note: There may be additional or multiples of reviews associated with a mission other than those listed above.

6.04 OSMA ISS Mgr Briefing with/Information to Chief SMA:

Periodic electronic and verbal notes and briefings are prepared and sent to Chief SMA and Deputy Chief SMA on issues and concerns with the upcoming increment. The information is added to the mission folder.

6.05 Chief SMA, OSMA ISS Mgr, & ISS Ops Mgr: Participate in the SMARR teleconference, Stage Operations Readiness Review (SORR), and the FRR:

The Chief SMA participates (normally via telecon) in the:

- SMARR teleconference in accordance with NSTS 22278.

- ISS FRR Board as a member, to attest to the readiness for flight via concurrence signature on the Certification of Flight Readiness in accordance with SSP 50108. If any of the ISS FRR Board members disagree with the readiness for flight, then this step will repeat with appropriate actions taken until all members can agree on readiness for flight. At that time, the Chief SMA will sign the CoFR.

Note: The Chief SMA may designate the Deputy Chief SMA or the Johnson Space Center (JSC) SMA Director for some reviews/missions.

The OSMA ISS Manager also participates with the Chief SMA to provide real-time assessment of information to the Chief SMA, as required.

Note: There may be additional or multiples of reviews associated with a mission other than those listed above.

6.06 ISS Ops Mgr: Participate in the ISS MMT Review:

The ISS Operations SMA Manager participates via telecon during the mission increment MMT Review and identifies SMA issues to the Chief SMA. The ISS Operations SMA Manager also provides assessment of the issues and concerns raised during the meeting for the Chief SMA.

NOTE: In the event of a contingency, the Chief SMA may implement a Corrective Action plan per HOWI 8710-GC034 and/or initiate a mishap investigation per HOWI 8621-GD016.

6.07 OSMA ISS Ops Mgr: Observe Major Increment Activities in SOC

Observe the major increment activities that may have a significant impact on safety such as launch, docking, landing, and EVA.

6.08 OSMA ISS Mgr, & ISS Ops Mgr: Collect SMA Flight Increment Data:

Collect and file all SMA increment issue data collected during the ISS increment in the designated electronic mission data folder.

6.09 OSMA ISS Mgr, & ISS Ops Mgr: Briefing with/Information to Chief SMA:

Periodic electronic and verbal notes are prepared and sent to Chief SM A and Deputy Chief SMA on issues and concerns with the ongoing increment. The information is added to the mission folder.

Any questions raised by the Chief SMA are researched and answered. The file of SMA issues is updated.

6.10 OSMA ISS Mgr Document Lessons Learned:

The OSMA ISS Manager documents any/all lessons learned and/or trends observed during the increment preparations, operations or closeout. The lessons learned are recorded in the appropriate databases.

6.11 OSMA ISS Mgr Closeout:

The OSMA ISS Manager ensures that all Quality Records and lessons learned are filed, and then closes out the process.

7. Quality Records

Record ID	Owner	Location	Media Electronic /hardcopy	Schedule Number & Item Number	Retention & Disposition
Record of SMA Issues	OSMA ISS Mgr	MSD files	Electronic or Hardcopy Storage	Schedule: 1 Item: 1.120.E	Keep until no longer has reference value then destroy when 15 years old
Briefing Materials	OSMA ISS Mgr	MSD files	Electronic or Hardcopy Storage	Schedule: 1 Item: 1.120.E	Keep until no longer has reference value then destroy when 15 years old
Record of SMARR & FRR SMA Issues	OSMA ISS Mgr	MSD files	Electronic Storage	Schedule: 1 Item: 1.120.E	Keep until no longer has reference value then destroy when 15 years old
Post Increment SMA Issues	OSMA ISS Mgr	MSD files	Electronic or Hardcopy Storage	Schedule: 1 Item: 1.120.E	Keep until no longer has reference value then destroy when 15 years old

**** Note:** When Post Mission SMA Issues are filed, duplicates from other Quality Records may be destroyed and files combined **